

Application No.: 10/658,260

Docket No.: 22106-00042-US

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application:

LISTING OF CLAIMS

- 1-13. (Canceled).
14. (New) A device for measurement of current in a conductor, comprising:
means for detecting a current;
means for transmission of a signal indicative of the current,
electronic means for control, acquisition and processing of the signal indicative of the current; and
connecting means for feeding the device and for communication,
wherein the device includes means for feeding the means for detecting a current in an intermittent manner and according to a predefined frequency that depends from an accuracy of the measurement of current to be performed and an energy savings to be achieved.
15. (New) The device according to claim 14, wherein the means for detecting a current includes an insulating support and at least one magnetic field sensor.
16. (New) The device according to claim 15, wherein the magnetic field sensor is a Hall sensor.
17. (New) The device according to claim 14, wherein the means for feeding are controlled by the electronic means for the control, acquisition and processing of the signal indicative of the current.

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18. (New) The device according to claim 14, wherein the means for the transmission of the signal indicative of the current are linked to means of adaptation of the signal.

19. (New) The device according to claim 18, wherein the means of adaptation of the signal are connected to means of analog-to-digital conversion.

20. (New) The device according to claim 14, wherein the connecting means further comprises feeding means and means of bidirectional communication.

21. (New) The device according to claim 20, wherein the feeding means are fed by a current transformer positioned on a conductor.

22. (New) The device according to claim 21, wherein the conductor is a conductor exposed to measurement.

23. (New) The device according to claim 20, wherein the feeding means are linked to an external feeding source.

24. (New) An automatic low voltage circuit breaker including one or more devices according to claim 14, the one or more devices being connected to a communication bus, in its turn connected to a protection device through an interface.

25. (New) A method for the for the measurement of the current in an electric conductor through a device according to claim 14, comprising:

feeding the device and bringing the device to a running condition;
maintaining the feeding for a period of time τ ; and
bringing the device to a stand-by condition with feeding interruption.

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26. (New) The method according to claim 25, wherein the period of time τ is divided into a first time fraction τ_1 of stabilization of the sensor and a second time fraction τ_2 of reading and transmission of the signal.